

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant:           Eduard Daniel Leendert           Examiner:           Stuart F. Baum  
                          Schmidt  
Serial No.:           10/521,518                           Group Art Unit:    1638  
Confirmation No.:   2030                           Docket:            294-208 PCT/US/RCE  
Filed:                February 28, 2006  
For:                  MODULATING DEVELOPMENTAL PATHWAYS IN PLANTS

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**Certificate of EFS-Web Transmission**

I hereby certify that this correspondence is being transmitted to the U.S. Patent and Trademark Office via the Office's electronic filing system on \_\_\_\_\_.

\_\_\_\_\_  
(Printed Name)

Signature: \_\_\_\_\_

**DECLARATION UNDER 37 C.F.R. §1.132**

I, Paul A. Passarinho, Ph.D., do hereby declare follows:

1. I am a co-inventor named in present U.S. patent application serial number 10/521,518.
2. I received a degree in Biotechnology from Wageningen University, Wageningen (The Netherlands), in 1995; a degree in Agricultural Engineering from Institut Supérieur d'Agriculture Rhone-Alpes, Lyon (France) in 1995; and a Doctor of Philosophy in Plant Sciences from Wageningen University, Wageningen (The Netherlands) in 2001.
3. I am familiar with an office action issued on September 25, 2009, concerning the above-identified application.
4. The present application describes RKS4, which relates to a receptor kinase like SERK.

5. RKS4 includes, for example, the nucleotide sequence as set forth in SEQ ID NO: 46, which is described in the originally-filed application, for example, on pages 64-65.
6. Exhibit A is entitled, "Improved disease resistance conferred by the RKS4 receptor." The tests and experiments described therein were conducted under my direction and control.
7. Exhibit B is entitled, "Improved organ size conferred by the RKS4 receptor." The tests and experiments described therein were conducted under my direction and control.
8. The RKS4 described in the application as having the nucleotide sequence as set forth in SEQ ID NO: 46 is identical to the nucleotide sequence that was used to create the RKS4-OX overexpression lines (e.g., RKS4-OX1, RKS4-OX2, and RKS4-OX3), described in Exhibits A and B.
9. As described in Exhibit A, for example, on the first paragraph of page 1, plant cells were transformed with an RKS4 construct having the nucleotide sequence as set forth in SEQ ID NO: 46. The plant cells transformed with RKS4 exhibited, *inter alia*, pathogen resistance to the following pathogens: the bacterium *Pseudomonas syringae*, the biotrophic fungus *Fusarium oxysporum*, and/or the Western Flower Thrips *Frankliniella occidentalis*. See, for example, second paragraph of page 1 and Table 1, rows RKS4-OX1, RKS4-OX2, and RKS4-OX3, and Figure 2, columns for GT5-A1 and/or GT5-A2, which each describe results from plant cells transformed with RKS4 having the nucleotide sequence as set forth in SEQ ID NO: 46.

10. As described in Exhibit B, for example, on the first paragraph of page 1, plant cells were transformed with an RKS4 construct having the nucleotide sequence as set forth in SEQ ID NO: 46. The plant cells transformed with RKS4 exhibited, *inter alia*, increased cell elongation during organ formation of seeds, roots, and petals. See, for example, the sentence bridging pages 1-2 and figures 2a and 2e, which describe an increase in cell elongation and size in cotyledons from RKS4-transformed plant cells, compared to cotyledons from plant cells not transformed with full length RKS4. Further development of the cotyledons from RKS4-transformed plant cells also resulted in an increase in size and shape of rosette leaves and large flowers, compared to leaves and flowers developed from cotyledons from plant cells not transformed with full length RKS4. See, for example, page 2, first paragraph, and Figures 2b and 2d. The increased size in petals was due to cell elongation and proliferation. See, for example, page 2, first paragraph. Moreover, root length was observed to be increased in the RKS4-transformed plants, compared to plants that were not transformed with full length RKS4. See, for example, page 2, first paragraph.

Appl. No: 10/521,518  
Art Unit 1638  
Applicant: Eduard Daniel Leendert Schmidt et al.  
Our Docket: 294-208 PCT/US/RCE  
Page 4

I hereby declare that all statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true. Further, I hereby declare that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States code, and that such willful false statements may jeopardize the validity of the application of any patent issued thereon.

Respectfully submitted,

Dated: March 27<sup>th</sup> 2010

Signed: \_\_\_\_\_

  
Paul A. Passarinho, Ph.D.